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Army Pamphlet 385-1**

Safety

**SMALL UNIT
SAFETY
OFFICER/NCO
GUIDE**

**Headquarters
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Washington, DC
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SUMMARY of CHANGE

DA PAM 385-1
SMALL UNIT SAFETY OFFICER/NCO GUIDE

This pamphlet--

- o Expands responsibilities for the additional duty safety officer/noncommissioned officer, including 18 key areas (para 1-7).
- o Revises procedures to install and execute an effective unit safety program (para 2-2).
- o Provides detailed risk assessment and risk management procedures for use at unit level (paras 3-1, 3-2, 3-3, 3-4).

--(a) Integrates risk management into unit operations and activities (paras 3-1 and 3-4).

--(b) Demonstrates application of each of the five steps of the risk management process to the operational environment (para 3-3).

--(c) Depicts integration of risk management into the military decision-making process (fig 3-1).

--(d) Depicts integration of risk management into troop-leading procedures (fig 3-2).

--(e) Provides a risk level matrix that combines likelihood of occurrence with potential severity to establish risk level (fig 3-4).

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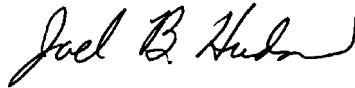
Safety

SMALL UNIT SAFETY OFFICER/NCO GUIDE

By Order of the Secretary of the Army:

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*General, United States Army
Chief of Staff*

Official:



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mobilization, procedures in this publication can be modified to support policy changes as necessary.

Proponent and exception authority. The proponent of this pamphlet is the Office of the Chief of Staff, Army (OCSA). The OCSA has the authority to approve exceptions to this pamphlet that are consistent with controlling law and regulation. The OCSA may delegate the approval authority, in writing, to a division chief within the proponent agency in the grade of colonel or the civilian equivalent.

History. This printing publishes a revision of this publication. It has been completely revised in content and structure and has been reorganized to be compatible with the Army electronic publishing database.

Summary. This pamphlet provides guidance for commanders and additional duty safety officers and non-commissioned officers to apply policies, procedures, and information to develop and execute a unit safety program.

Applicability. This pamphlet applies to Active Army, the Army National Guard of the United States (ARNGUS), and the U.S. Army Reserve (USAR). During

Suggested Improvements. Users are invited to send comments and suggested improvements on DA Form 2028 (Recommended Changes to Publications and Blank Forms) directly to Headquarters, Department of the Army (DACS-SF), 200 Army Pentagon, Washington, DC 20310-0200.

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Glossary

Chapter 1

Unit Safety Management

1-1. Purpose

a. This Department of the Army pamphlet (DA PAM) is written for the additional duty unit safety officer/noncommissioned officer (ADSO/NCO) at company-level ground units. The ADSO/NCO assists the commander with safety responsibilities when there is no assigned safety officer by table of organization and equipment (TOE) or table of distribution and allowances (TDA).

b. This DA PAM provides guidance in applying policies and procedures and necessary information for managing a unit safety program. Separate chapters discuss how to initiate a unit safety program, apply the risk management (RM) process, conduct safety surveys, report and investigate accidents, ensure safety in tactical operations, and promote safety in garrison and off-duty activities, including privately owned vehicle (POV) accident prevention.

c. Aviation-specific safety requirements and guidance for aviation unit safety programs are contained in Army Regulation (AR) 385-95.

d. The ultimate safety responsibility for preserving human and material resources rests with the commander.

1-2. References

Required and related publications are listed in appendix A.

1-3. Explanation of abbreviations and terms

Abbreviations and special terms used in this regulation are explained in the glossary.

1-4. The Unit Safety Program

a. Safe operations start with unit readiness. Readiness depends on the ability of a unit to perform its mission-essential task list (METL) to standard. Ready units have self-disciplined soldiers who consistently perform to standard; leaders who are ready, willing, and able to enforce standards; training that provides skills needed for performance to standards; standards and procedures for task performance that are clear and practical; and support for task performance, including required equipment, maintenance, facilities, and services.

b. Performing to standard is one of the key steps in preventing accidents. However, each leader must be aware that written standards may not exist for every task. High-risk tasks must be identified and reviewed to ensure that adequate standards exist and that unnecessary risks are eliminated. It is the leader's responsibility to ensure standards are enforced and unnecessary risks are not taken.

c. When safety is fully integrated in a unit, soldier errors, equipment breakdowns, and the negative effects of the operating environment are kept to a minimum.

1-5. Safety guidance

a. Commanders are responsible for soldier safety and the quality of the unit safety program.

b. The success of the unit safety program depends on command emphasis, the recommendations of the ADSO/NCO to the commander, and application of sound risk management principles. To underscore this command emphasis, the ADSO/NCO should be a conscientious and experienced soldier. A successful unit safety program depends upon a genuine and supportive collaboration between leaders and soldiers.

(1) The commander is the foundation of the unit safety program. The commander directly supports the safety program by verbal and written guidance, action, and example.

(2) The ADSO/NCO advises and assists the unit commander to develop and

implement safety policy, including risk management. The ADSO/NCO also develops and assists leaders in executing an integrated and comprehensive accident prevention program within the scope of the unit's TOE or TDA mission.

c. The ADSO/NCO is a member of the staff and performs within guidelines set by the commander. These guidelines may specify selected activities that require the commander's personal approval regardless of controls that may mitigate risk to a lower level. Commanders should delegate authority to the ADSO/NCO to direct necessary action when personnel, property, or equipment are endangered. Recommendations made by the ADSO/NCO in the name of the commander will be in line with policy and guidance provided by the commander.

d. The Army develops accident prevention programs and procedures as controls for Army-wide hazards. However, controls only protect the force when the commander implements them at unit level with the help of the ADSO/NCO and other unit leaders and soldiers.

1-6. Safety program elements

a. Accident prevention and safety have no defined boundaries. Virtually every activity, whether on-duty or off-duty, contains a safety component.

b. Most safety programs within the Army are comprised of four core elements: workplace safety, accident investigations and reporting, transportation safety, and family/off-duty safety. Additional safety elements are added based on the mission, functions, and tasks performed by the organization, such as range safety, explosives safety, aviation safety, and tactical safety.

c. This DA PAM reflects the areas for which the ADSO/NCO has primary responsibility. The ADSO/NCO monitors, but is not responsible for, other safety-related programs such as fire prevention, hearing conservation, and radiation protection.

1-7. ADSO/NCO functions

a. The functions of the ADSO/NCO include, but are not limited to, the following:

(1) Conduct surveys and hazard analyses, prioritize hazards identified during the survey by accident probability and severity, recommend controls or corrective action, track abatement of the identified hazards, and advise the commander and unit leaders as appropriate.

(2) Participate in unit-level mission planning to ensure that hazard identification, risk assessment, and integration of controls are addressed by the commander and other mission planners (such as platoon leader, operations officer, supply officer) prior to and during unit operations.

(3) Observe unit operations to detect and correct unsafe practices.

(4) Advise the commander on the status and adequacy of the unit safety program.

(5) Advise the commander on all safety matters to support mission accomplishment.

(6) Ensure all personnel attached or assigned are trained in risk management and other safety-related subjects.

(7) Ensure unit accidents are reported and investigated in accordance with AR/DA PAM 385-40, and coordinated with the host installation safety office. Review reports for accuracy, completeness, and timeliness.

(8) Assist in developing and reviewing unit Standing Operating Procedures (SOP) to ensure safety and risk management are integrated and controls are established for identified hazards.

(9) Monitor tests of the unit's pre-accident plan and recommend improvements to the plan, as necessary.

(10) Survey the condition of unit property (equipment) and facilities, ammunition storage areas, arms rooms, motor pools, and field training sites, including bivouac

sites. When safety deficiencies are found, advise the commander and recommend corrective action. Follow up to ensure the corrective action is taken.

(11) Acquire and maintain required references to perform assigned duties; AR 385–10 and AR/DA PAM 385–40 are essential in daily operations. Appendix A contains a list of other safety references that may assist in the performance of assigned duties. These references can be found on the Internet at one of the sites listed in appendix A. The installation safety office can also assist with locating reference material.

(12) Provide safety oversight to unit operations involving the transport or storing of arms, ammunition, explosives, petroleum products, and other hazardous material.

(13) Monitor unit Hazard Communication (HAZCOM) Program to ensure that personnel working with or around hazardous materials are informed of the hazards and trained in the HAZCOM Program.

(14) Manage unit Accident Prevention Awards Program. (See AR 672–74.)

(15) Consult the local safety office for help identifying required safety records and files and setting up a system for their maintenance.

(16) Participate in after action reviews (AARs) to ensure that lessons learned are captured and disseminated for use in planning and executing the next iteration of the same mission or similar missions.

(17) Perform other actions to enhance and promote the unit safety program and individual soldier involvement in preventing accidents. For example, conduct a periodic safety awareness day. Suggested activities are found in appendix C.

(18) Assist the commander in promoting POV safety (see para 7–2), including motorcycle safety.

b. The effectiveness of the ADSO/NCO depends on a positive working relationship with all unit personnel. Barriers that inhibit communication could delay identification and correction of hazards. The ADSO/NCO should establish and maintain open channels of communication with the commander, unit leaders, and unit personnel.

Chapter 2

The Unit Safety Program

2–1. Starting the Unit Safety Program

a. This chapter provides step-by-step procedures for preventing accidents that can result in death, injury, damaged or destroyed equipment, and loss of mission capability.

b. The key to accident prevention is compliance with standards and successful application of the risk management process to eliminate hazards or reduce their risk. To achieve this, measures must be taken to enforce standards and implement controls that eliminate hazards or reduce the risk of injury or the chance of damage to equipment.

2–2. Where to begin

a. Request an in-brief with your commander to obtain guidance on your part in the safety program. This meeting will serve as the basis for subsequent meetings and set the tone for your role as ADSO/NCO. Items for discussion include:

- (1) Risk management in unit operations.
- (2) Unit safety surveys and inspections.
- (3) Unit and ADSO/NCO safety training.
- (4) Development of a unit pre-accident plan.
- (5) Unit accident reporting and notification procedures.
- (6) Promoting unit off-duty/family safety.

(7) Authority of the ADSO/NCO to direct necessary corrective action.

b. Request training from the installation or supporting safety office and arrange for participation in an ADSO/NCO course as soon as possible. Also, ensure your role as the ADSO/NCO is documented on unit orders and is provided to the installation or supporting safety office. Ask questions, identify support resources (promotional items, training materials, U.S. Army Safety Center (USASC) web site: <http://safety.army.mil>), and establish a good working relationship with your supporting safety office.

c. Review your unit's overall mission and understand your unit's METL:

(1) What are the key elements essential for mission success?

(2) What personnel, items of equipment, facilities, tools, or supplies are on hand and important for mission success?

(3) Consider the risks in all aspects of the unit METL.

d. Determine where the hazards exist. Conduct a safety survey of your unit, using checklists to assist you in identifying hazards. Then, focus on the unit activities and missions that are immediately ahead (for example, the next field training exercise (FTX); your unit receiving new weapons systems, ammunition, or Army motor vehicles (AMVs); or drastically changed operational procedures). Keep your focus on these areas as you collect needed information. References in appendix A and appropriate Army regulations, technical publications, field manuals, and SOPs will help identify standards that must be followed to ensure safe unit operations.

e. Review your unit SOPs. Using the references mentioned above, evaluate how effectively safety standards and risk management have been integrated into the SOPs. Talk to key personnel in your unit and get their opinions regarding the effectiveness of the unit safety program and any potential accident areas. Your objectives are to detect the likelihood for an accident and minimize the chance that one will occur.

f. Develop a unit pre-accident plan. Your unit should have a detailed pre-accident plan listing actions to be taken if an accident occurs. A good plan will include emergency action to be taken in case of an accident, as well as actions to assist an investigation board to complete its task. A guide to preparing a pre-accident plan is at appendix B.

g. Use the information you gathered from referenced publications, checklists, survey results, talking to key personnel, and reviewing accident reports to evaluate your unit safety status. Consult with the experts in your supporting safety office. Use this information to narrow your attention to the problem areas that pose the most risk to your unit, its people, equipment, and mission. Evaluate each problem area, assign priorities, develop control options, and decide how to effectively present your results to the commander. A professional, fact-based recommendation will aid the commander in determining appropriate courses of action to keep identified risks manageable. Remember, the commander makes the final decision once advised of all the facts.

h. When you are ready to discuss the status of the safety program and make recommendations for improvement, set up a meeting with the commander and other key leaders. At this meeting—

(1) Direct attention to the areas where the unit is strong and also to the areas where you have detected significant hazards or problems.

(2) Recommend specific actions to eliminate or reduce hazards in the problem areas.

(3) Obtain the commander's approval and personal support for corrective action in these areas.

(4) Clarify ADSO/NCO authority to make or direct the corrective action. Note: Commanders want to support the safety program, however; perceived conflicts with time, resources, readiness, and mission requirements may arise. Your job is to make sure that your recommendations clearly protect soldiers' lives and equipment and

help accomplish the unit mission. The commander's job is to make a decision, balancing your recommendations against the perceived conflicts, based upon his level of authority to accept risk.

i. Other topics you may want to discuss with the commander and unit leaders include:

(1) *Support for command policies.* Make sure the commander's directives for controlling hazards reach the key people who must implement them. Follow up regularly to make sure that controls remain in place and are achieving the desired results. Remember, it is the responsibility of the commander and subordinate leaders to execute the safety program. Your role is to make recommendations and coordinate safety activities.

(2) *Awards.* Safety awards that recognize individual and unit safety performance are a great tool for generating enthusiasm for the unit safety program. Develop an awards program based on AR 672-74, request funds to support it, and recommend safety awards that recognize individuals or units for specific acts that support accident prevention. Installation/support safety offices can assist in your program.

(3) *Unit safety councils.* A unit safety council provides a forum for a risk management review of unit operations. An effective council has members that represent a cross section of the unit with all sections of the unit represented. Use this forum to invite outside agencies such as Installation Safety, Preventive Medicine, Alcohol and Drug Abuse Prevention and Control, Chaplain Services, Environmental Compliance Specialists, and so forth, to provide assessment of your unit programs or to give insight into available services. AR 385-95 contains safety council requirements for aviation units and provides useful guidelines for the ADSO/NCO to develop an effective ground unit safety council.

(4) *Unit training.* Get involved in planning unit training and integrate safety and risk management up front. Apply the risk management process outlined in chapter 3. Seize the many opportunities to help the commander integrate safety standards in the performance of METL tasks in the unit training management cycle. Your industrial hygienist can assist with training on occupational exposures such as asbestos brake repair, respirator use, and personal protective equipment.

(5) *New personnel.* Conduct a safety-oriented briefing for new personnel in the unit. Provide specific safety information about the unit safety program. Platoon and section sergeants are responsible for briefing newly assigned personnel on specific job-related safety issues, such as wearing hearing protection, eye protection, protective clothing, and vehicle operations.

(6) *Supporting the Army Safety Program.* One of your tasks as ADSO/NCO is to support unit compliance with directives and guidelines from higher headquarters. You can request various promotional materials such as posters, handouts, checklists, videos, and safety packets from your supporting safety office. This information could help prevent accidents in specific operational areas. For this material to be effective, it must be used. As the ADSO/NCO, you play a very important role in ensuring that these tools get to the organizations and personnel who need them. If you are experiencing a particular hazard/problem, get help from your supporting safety office and use the U.S. Army safety website (<http://safety.army.mil>).

2-3. Operational safety

a. ADSO/NCOs assist in preventing accidents in all areas of operations (during peacetime and combat). Army doctrine recognizes the adverse impact of accidents on Army operations and mission accomplishment. FM 25-101, states, "Historically, more casualties occur in combat due to accidents than from enemy action. Protecting the force regardless of whether it is during training, peacekeeping, or combat operations is critical to mission success.

b. In any theater of operations, safety efforts should focus on applying risk

management to ensure safe mission accomplishment. The effective ADSO/NCO should—

- (1) Get involved in planning unit operations.
 - (2) Apply risk management techniques to identify unnecessary risks and recommend adequate control measures.
 - (3) Ensure controls are executed during the operation.
 - (4) Collect information on, and report, all accidents. Higher headquarters will analyze this information to help develop strategies to prevent recurrence.
 - (5) Follow up to ensure lessons learned are implemented.
- c. A strong peacetime safety program will carry over into battlefield operations.

2–4. Other sources of assistance

- a. Safety and occupational health are parallel programs with several common elements. The ADSO/NCO can request assistance from local occupational health personnel/industrial hygienist to assist in certain aspects of the safety program. Some areas where their expertise will benefit the unit are hearing conservation, vision conservation, occupational health/medical surveillance, industrial hygiene, respiratory protection, ergonomics, and monitoring for exposure to hazardous materials.
- b. Additional sources of assistance are listed in appendix E.

Chapter 3 Risk Management

3–1. Introduction

Protecting the force by managing risk is the commander's responsibility. It is the responsibility of the ADSO/NCO to advise and assist the commander in ensuring risk management is an integral part of the unit's operations and training.

a. Risk management is the Army's principal risk reduction process for protecting the force from losses and conserving resources. The purpose of risk management is to identify hazards and risks and to take reasonable measures to reduce or eliminate them. The risk management process consists of identifying and assessing hazards, developing controls and making risk decisions, implementing controls, supervising and evaluating.

b. Risk management allows units to operate successfully in high-risk environments. Leaders at every level have the responsibility to identify hazards, to take measures to reduce or eliminate hazards, and to accept risk only to the point that the benefits outweigh the potential losses. The risk decision can then be made at the appropriate level of leadership, in accordance with published risk acceptance authority.

c. Risk management is not an add-on feature to the decision-making process or troop-leading procedures. It is a fully integrated element of planning and executing operations. The goal of integrating the process is to make risk management a routine part of planning and executing operational missions.

d. Figure 3–1 describes the risk management process as it is integrated into the military decision-making process; figure 3–2 shows the risk management process as it is integrated into troop-leading procedures; figure 3–3 provides guidance on determining the kinds of hazards to risk manage; and, figure 3–4 provides a key for determining risk level. Key risk management terms and their definitions can be found in the glossary.

e. The Army's doctrinal manuals articulate the risk management process as its principal risk-reduction tool. Field Manual (FM) 100–14 and FM 101–5 provide

further information on the application of the risk management process. Sample risk management worksheets can be found in FM 100-14, appendix A.

3-2. Risk management versus risk assessment

a. The Army has become increasingly effective in identifying hazards and assessing risks, the first two steps of the risk management process. Many units have developed matrices and forms to assist soldiers in determining risk levels for various tasks. Unfortunately, in many cases the process stops with risk assessment.

b. The entire five-step risk management process described in paragraph 3-3 enables leaders at all levels to go beyond identifying and assessing hazards to controlling the risks associated with those hazards.

3-3. Risk management steps

The risk management process is applied by the commander and the staff to any mission and environment. The five steps of risk management are:

a. Step 1—Identify hazards. Identify hazards that will negatively affect personnel, equipment, or mission accomplishment. Consider all aspects of METT-T (mission, enemy, terrain and weather, troops, and time) for current and future situations. Sources of information include reconnaissance, experience of commander and staff, brainstorming, experts, publications (such as SOPs and technical manuals), the unit's accident history, and scenario thinking. Hazards that cannot be eliminated by the unit or its subordinate units and are most likely to result in loss of combat power, should be risk-managed. One tool to determine this is to answer the questions in figure 3-3. Another tool is the commander's guidance. A commander may set local standards that place specific activities outside the scope of risk management without his personal approval, such as activities where the risk might imperil his intent, his higher commander's intent, or a critical capability of the unit. For example, a commander might require his personal approval before any personnel who have not completed drown-proof training can participate in river-crossing operations.

b. Step 2—Assess the hazards. Determine the risk of potential loss based on probability and severity of the hazard. In other words, what are the chances something bad is going to occur; and, if it does, what are the consequences, using a worst-case scenario. Determining the risk associated with a hazard is more an art than a science. Use historical data, intuitive analysis, your judgment and that of experienced personnel, and the matrix at figure 3-4 to estimate the probability and severity of each hazard. The intersection of the probability column and the severity row defines the level of risk.

c. Step 3—Develop controls and make risk decision.

(1) *Develop controls.* For each hazard, develop one or more controls that will eliminate or reduce the risk of the hazard. Specify the who, what, where, when, and how for each control. Consider the reason for the hazard, not just the METT-T itself. (See fig 3-3.) One way to implement effective controls is through individual and collective training that ensures performance to standard.

(2) *Determine residual risk.*

(a) For each hazard, as controls are developed, revise the assessment of the level of risk remaining (residual risk), assuming the controls for it are implemented.

(b) Overall risk of a mission is determined after all controls are assumed to have been implemented. If one hazard has a high residual risk, the overall risk of the mission is high, no matter how many moderate or low-risk hazards are present.

(3) *Make risk decision.* The commander alone decides whether or not to accept the level of residual risk or to elevate the decision to a higher level of command. The determination to elevate the decision is based on the risk acceptance authority published by higher headquarters. If the commander determines the risk is too great to continue the mission or a course of action (COA), he or she will direct the development of additional controls or modify, change, or reject the COA or mission.

d. Step 4—Implement controls. State how each control will be put into effect and communicated to personnel who will make it happen.

e. Step 5—Supervise and evaluate.

(1) *Supervise controls.* Leaders supervise mission rehearsal and execution to ensure standards and controls are enforced. Techniques include spot checks, brief backs, and inspections.

(2) *Evaluate controls.* Determine the effectiveness of each control in reducing or eliminating risk. For controls that are not effective, determine why and what to do the next time the hazard is identified. For example, in the next operation, the commander and staff might change the control, develop a different control, or change how the control will be implemented or supervised. To complete the process, the commander should disseminate lessons learned.

Risk Management Steps

Military Decision-Making Process*	Identify Hazards	Assess Hazards	Develop Controls & Make Risk Decision	Implement Controls	Supervise & Evaluate
1. Receipt of Mission	X				
2. Mission Analysis	X	X			
3. COA Development	X	X	X		
4. COA Analysis (War Game)	X	X	X		
5. COA Comparison			X		
6. COA Approval			X		
7. Orders Production				X	
8. Rehearsal	X	X	X	X	X
9. Execution & Assessment	X	X	X	X	X

*FM 101-5, 31 May 97

Figure 3-1. Risk management actions integrated into the military decision-making process

Troop-Leading Procedures		Risk Management				
Troop-leading steps		Identify hazards	Assess hazards	Dvlp ctrls/make decision	Implement controls	Supervise & evaluate
1	Receive Mission	X				
	- Perform initial METT-T analysis	X				
2	Issue the warning order	X				
3	Make a tentative plan	X	X			
3A	Make estimate of the situation	X	X			
3B	Detailed mission analysis	X	X			
3C	Develop situation & courses of action for	X	X			
3C1	-Enemy situation (enemy COAs)	X	X			
3C2	-Terrain & weather (OCOKA)	X	X			
3C3	-Friendly situation (troops & time avail)	X	X			
3C4	-Courses of action (friendly)	X	X			
3D	Analyze courses of action - wargame	X	X			
3E	Compare courses of action			X		
3F	Make decision			X		
3G	Expand selected COA into tentative plan			X		
4	Initiate movement				X	
5	Reconnoiter				X	
6	Complete the plan				X	
7	Issue the order				X	
8	Supervise & refine the plan					X

Figure 3–2. Risk management actions integrated into the troop-leading procedures

Q - Is hazard adequately controlled?		Adequate	
		Yes	No
Identified METT-T Hazard	Support- Is type/capability/ condition of support adequate to control the hazard? -Personnel -Equipment/material -Supplies -Services/facilities	SAMPLE	
	Standards- Is guidance/procedure adequately clear/practical/specific to control the hazard?		
	Training- Is training adequately thorough and recent to control the hazard?		
	Leader- Is leadership ready, willing, and able to enforce standards required to control the hazard?		
	Unit Self-Discipline- Is unit performance and conduct sufficiently self-disciplined to control the hazard?		

A - If all "yes", no further action.
 - If one or more "no", risk-manage this hazard.

Figure 3–3. Hazard assessment

Risk Level:
E - Extremely High
H - High
M - Moderate
L - Low

		Hazard Probability				
		Frequent	Likely	Occasional	Seldom	Unlikely
SEVERITY	Catastrophic	E	E	H	H	M
	Critical	E	H	H	M	L
	Marginal	H	M	M	L	L
	Negligible	M	L	L	L	L

HAZARD PROBABILITY (The likelihood that an event will occur.)

Frequent – Occurs often, continuously experienced.

Likely – Occurs several times.

Occasional – Occurs sporadically.

Seldom – Unlikely, but could occur at some time.

Unlikely – Can assume it will not occur.

SEVERITY (The expected consequence of an event in terms of degree of injury, property damage, or other mission-impairing factors.)

Catastrophic – Death or permanent total disability, system loss, major property damage.

Critical – Permanent partial disability, temporary total disability in excess of three months, major system damage, significant property damage.

Marginal – Minor injury, lost workday accident, minor system damage, minor property damage.

Negligible – First aid or minor medical treatment, slight system impairment.

RISK LEVELS

E (Extremely High) – Loss of ability to accomplish mission.

H (High) – Significant degradation of mission capabilities in terms of required mission standard.

M (Moderate) – Degradation of mission capabilities in terms of required mission standards.

L (Low) – Little or no impact on accomplishment of mission.

Figure 3–4. Individual hazard risk assessment matrix

3–4. The role of the ADSO/NCO

The ADSO/NCO plays a key role in all phases of the risk management process, advising the commander on hazards, risks, and controls associated with the mission. Additionally, the ADSO/NCO does his or her best to ensure that risk management is integrated into unit planning, processes, and procedures and assists in developing hazard identification and assessment tools tailored for the unit mission.

Chapter 4 Surveys

4–1. General

a. Accidents don't just happen. Human errors, materiel failures, and environmental factors cause accidents. The result can be death, injury, damage or destruction of equipment or other property, and loss of mission capability.

b. A critical function of the ADSO/NCO is to conduct a thorough survey of the unit's activities and facilities to identify hazards. Review the unit accident/casualty history prior to the survey to assess the unit's safety program and overall safety climate. If a copy of the most recent safety inspection is not available, contact the installation/support safety office for a copy and for added information on accident experience. Analyzing this information can help the ADSO/NCO decide where to direct attention during the survey.

c. Surveys should have a positive effect on the unit. The survey results should be used to improve operations and procedures and eliminate hazards in the workplace.

d. Commanders also have a part in the survey process. As a result of surveys, commanders can initiate safer work procedures, provide safer work areas, and instill safer attitudes in unit personnel.

e. Improper/unsafe acts should be corrected on the spot. Turning a blind eye to a known hazard reinforces poor discipline and sets a new, lower standard.

f. The ADSO/NCO coordinates with the installation safety office to ensure that the periodic standard Army safety and occupational health inspections (SASOHI), required by AR 385–10, are accomplished by qualified inspectors.

4–2. Benefits of surveys

Adequately planned safety surveys will allow ADSO/NCOs to—

a. Detect hazards that can be eliminated or controlled.

b. Emphasize the need for current SOPs and other workplace controls, such as equipment safeguards and personal protective equipment.

c. Promote the safety program by encouraging a positive, cooperative attitude.

d. Encourage personnel to inspect their own work areas for potential safety hazards.

e. Communicate with unit personnel and better understand the nature of the hazards they face in the workplace.

4-3. Planning and conducting surveys

a. Inspect all areas at least annually. High-hazard areas should be inspected more frequently. Request assistance from supervisors, technical experts, and maintenance personnel during safety surveys. Your supporting safety office will also provide guidance.

b. During surveys, be concerned with equipment and work area conditions, unsafe personnel practices, and unsafe job practices. Make recommendations to eliminate or minimize the hazard and support the successful outcome of the mission.

c. To have a successful survey program, the ADSO/NCO must—

(1) *Prioritize.* Look first at areas/operations that have the highest potential for loss.

(2) *Schedule.* Develop a schedule of what to inspect and when, with hazardous and high-accident-occurrence areas scheduled more often. Include surveys on the training schedules.

(3) *Use checklists.* Use of a safety checklist is recommended for unit evaluations. Provide areas to be surveyed with the checklists you will be using. Locally developed checklists tailored to your unit are also helpful. Include references when possible.

(4) *Survey.* Look closely at the unit personnel, facilities, and areas.

(5) *Communicate.* Talk to people and ask them about safety in the workplace.

(6) *Keep Records.* Keep good records of your surveys. Previous survey records show where improvement has been made and areas that still need improvement. A two-year unit history of accident summaries provided by your battalion or local safety office will be beneficial. Use these to prepare for the survey of your unit.

(7) *Correct problems.* Once the survey is completed, brief leaders on the findings. Make recommendations and assist with corrective actions, which should be implemented immediately.

(8) *Follow up.* Follow up on corrective actions and report to the commander on a regular basis until the actions are completed. If serious hazards cannot be corrected within 30 days, report the deficiency to the installation safety office to be recorded on DA Form 4756 (Installation Hazard Abatement Plan).

4-4. Survey teams

a. Commander participation. The commander should participate in the survey as an indication of personal support for the safety program.

b. Survey teams. Consider using survey teams to increase soldier participation and ensure comprehensive coverage. The ADSO/NCO should determine the size and composition of the survey team after consulting with the commander.

c. Organizing the survey.

(1) After survey team members have been selected, organize them into sub-teams and assign individual responsibilities. Ensure that team members understand the purpose of the survey.

(2) Brief the survey team on the organizational structure and mission of the unit and on the purpose and use of the safety checklist.

(3) Provide the survey team with necessary references to accomplish the survey.

(4) Prepare in/out-brief for the commander.

(5) Ensure survey results are documented and filed for future review.

Chapter 5 Accident Investigation and Reporting

5-1. General

a. The primary purpose of investigating and reporting accidents is to identify

accident causes in order to prevent similar accidents. It is part of the accident prevention process.

b. All accidents involving personnel injury or property damage must be reported promptly to the chain of command and the safety office. Persons involved in or aware of an accident will report it immediately to the chain of command.

c. The type of accident investigation and report required depends on two things: determining whether the injury or damage constitutes an Army accident and, if it does, the accident classification.

d. Preventing accidents and reporting and investigating them when they occur is a chain-of-command responsibility. The ADSO/NCO is a key player in the process and may be the accident investigator for a Class C or D accident.

e. AR 385-40 and DA Pam 385-40 provide information concerning accident reporting and investigation.

5-2. The role of the ADSO/NCO in accident investigation and reporting

a. One of the primary roles of the ADSO/NCO is ensuring that a pre-accident plan (see app B) is in place, which includes emergency notification procedures, the responsibilities of all unit organizations responding to the accident, and procedures and priorities at the accident site.

b. Once an Army accident has occurred, the role of the ADSO/NCO is to ensure that the pre-accident plan is followed, to advise the chain of command on the classification of the accident and the type of investigation required, to assist and support the unit and/or the safety accident investigation board, and to monitor the investigation.

c. The type of support required of the ADSO/NCO prior to and following the arrival of the safety accident investigation board is listed in the pre-accident plan at appendix B.

d. The ADSO/NCO may be required to personally conduct the accident investigation and complete the report for certain Class C and Class D accidents, in accordance with AR 385-40.

5-3. Identifying Army accidents

Generally speaking, all unplanned events that cause injury to Army personnel or damage to Army equipment are Army accidents. However, some events, such as injury and damage caused by combat losses resulting from enemy action, crimes, or suicide are not considered Army accidents. Army accidents may occur on or off duty, in privately owned vehicles, sports, recreation, at home, or during training or other duty. Complete guidance for determining which accidents are considered Army accidents is contained in AR 385-40.

5-4. Classifying Army accidents

There are four classes of Army accidents based upon the severity of the injury or the dollar cost of property damage. The purpose of classifying the accident is to identify and implement the appropriate notification, investigation, and reporting requirements.

a. Class A accident. An Army accident in which the total cost of property damage is \$1,000,000 or more; an Army aircraft or missile is destroyed, missing, or abandoned; or an injury and/or occupational illness results in a fatality or permanent total disability.

b. Class B accident. An Army accident in which the total cost of property damage is \$200,000 or more, but less than \$1,000,000; an injury and/or occupational illness resulting in permanent partial disability; or a single occurrence resulting in three or more personnel being hospitalized as in-patients for medical treatment.

c. Class C accident. An Army accident in which the total cost of property damage is \$20,000 or more, but less than \$200,000; a nonfatal injury that causes any

loss of time from work beyond the day or shift on which it occurred; or a nonfatal occupational illness that causes loss of time from work (for example, one work day) or a disability (lost time case).

d. Class D accident. An Army accident in which the resulting total cost of property damage is \$2,000 or more, but less than \$20,000.

5-5. Notification procedures

a. Chain-of-command notification will be in accordance with AR 385-40 and the applicable command SOP.

b. The commander who first becomes aware of any Class A or B accident will notify USASC immediately. Telephone numbers and telephonic notification forms are located in AR 385-40.

c. The commander who first becomes aware of any aviation Class C accident will notify the USASC immediately.

d. No immediate notification to the USASC is required for Class C ground accidents or Class D accidents (unless safety-of-use or ground precautionary message information is identified). However, all four classes of accidents must be investigated and reported in accordance with AR 385-40.

5-6. Determining who will conduct the safety accident investigation

a. Accident classification determines who will investigate an accident.

(1) Class A and B accidents will be investigated by either a USASC accident investigation board or a board appointed by a local appointing authority.

(2) Ground Class C accidents and below will be investigated as determined by the chain of command. (Aviation Class C accidents will be investigated by a board in accordance with AR 385-40.)

b. Investigation procedures and board appointing procedures are covered in detail in AR 385-40 and DA PAM 385-40.

5-7. Conducting safety accident investigations

Since an accident investigation occurs “after the fact,” its primary focus is on identifying what happened, why it happened, and how to prevent it from happening again.

a. Determining what happened is often the easiest part. The investigator looks at the accident site and collects information from personnel involved in the accident and from witnesses on what caused the accident and the injuries. Accident causes can fall into three broad categories: human, materiel, and environmental factors. The causes could be a combination of any of the three.

b. Deciding why an accident happened is often the most difficult part of the investigation. Human error accidents, the most common cause, result from one or more of the following system inadequacies. Figure 5-1 is a useful diagram for determining these inadequacies.

(1) *Support Failure.* Equipment/facilities are either not available or inadequate. For example, the unit tire cage was not properly constructed or the unit does not have a twelve-foot extension for the air hose.

(2) *Standards Failure.* The standard is not clear, practical, or does not exist. When this happens, the command (or the Army) has not provided adequate standards. For example, the unit SOP requires the use of a tire cage; however, it does not require the use of a twelve-foot air hose extension.

(3) *Training Failure.* Training standards exist, but the soldier has not been adequately trained to standard. For example, an individual had never had training on how to service split rims and did not know that a tire cage and air hose extension were required for inflation.

(4) *Leader Failure.* The standard is known but is not enforced. When leaders do not enforce standards, soldiers develop their own (short cuts) and the risk of an

accident increases. For example, a leader sees an unqualified individual in the motor pool changing the tire and does not take immediate corrective action.

(5) *Individual Failure.* The standard is known but is not followed by the soldier. The soldier has been properly trained and knows the correct procedures but chooses not to follow them. For example, the soldier knows there is a requirement to be certified on servicing tires; and, although not certified, the soldier attempts to service the tire anyway and does not wait for maintenance personnel.

c. The investigation process is not complete until recommendations are developed on how to prevent a similar accident from happening. When the causes of the accident and their systemic inadequacies have been identified, specific recommendations must be developed. To be effective, they must be targeted at the level of command most responsible for correcting the deficiency: unit-level, higher-level, or Department of the Army-level. Then, a system to ensure that recommendations are implemented closes the loop.

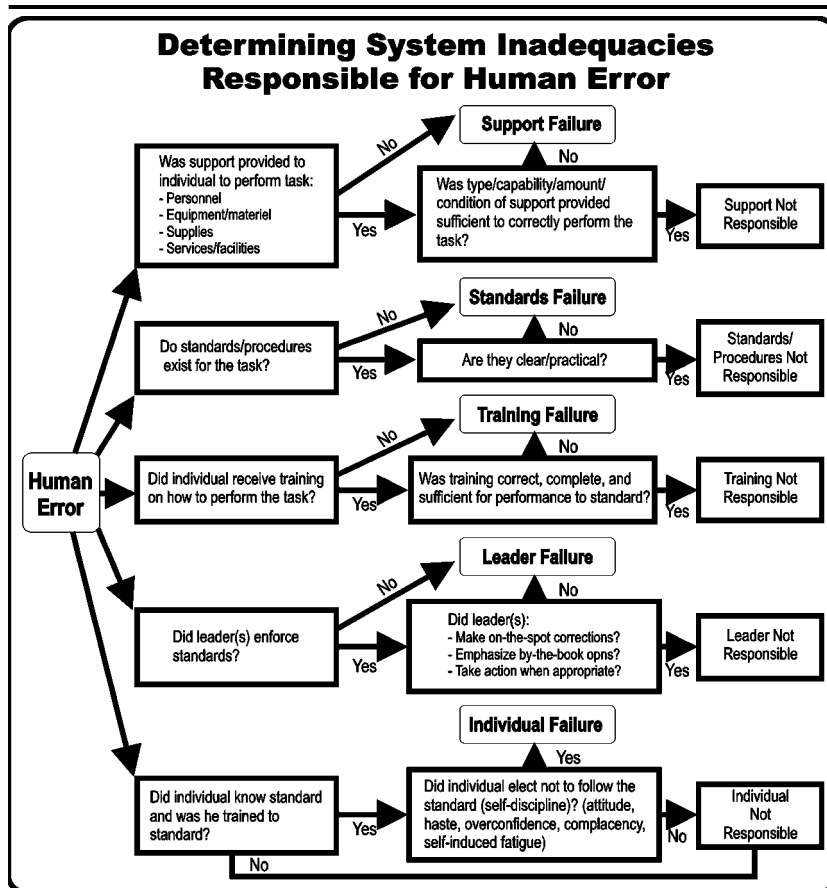


Figure 5-1. Determining system inadequacies responsible for human error

5-8. The accident report

a. The USASC uses accident reports to determine lessons learned, Army wide problems, and unfavorable trends. Valid and reliable accident reports may lead to a change in equipment design, development of new standards, or modifications to existing training. For example: After reviewing accident reports prepared by ADSO/NCOs, the Army recognized that a significant number of sports injuries were happening on baseball fields. Injuries were occurring as runners slid into bases that were fixed in place. A program was established to replace fixed bases with breakaway bases. The installation of these breakaway bases has significantly reduced this type of injury. Before making a decision of this kind, the Army needs evidence to justify such a change; this evidence was provided by accident reports filed by ADSO/NCOs. Many other accident reports involving aircraft, tanks, and other equipment have resulted in design changes and operational manual changes. Identification of problems and implementation of corrective actions depend heavily on safety officers/NCOs. Use of the information from accident reports saves lives, saves millions of Army dollars, and increases mission capability.

b. The Army accident prevention program, therefore, depends on thorough accident investigations and accurate and complete accident reports, using the appropriate forms prescribed in AR 385-40 and DA PAM 385-40. The DA Form 285 series is used for ground accidents; the DA Form 2397 series is used for aviation accidents. DA PAM 385-40 contains instructions, blank forms, and completed sample reports.

c. If the accident was caused by materiel failure, an Equipment Improvement Report (EIR) in accordance with DA PAM 738-750 or a Product Quality Deficiency Report (PQDR) should be submitted, as appropriate. The unit maintenance officer and command logistics assistance officer (LAO) can assist in completing the EIR. (Note: For aviation, use the PQDR in accordance with DA PAM 738-751 and work with the unit aviation safety officer.)

5-9. Release of accident reports and information

Accident information, reports, and records may be used only for accident prevention purposes. This information should not be released to anyone for any other purpose. Requests should be referred to the installation safety office or the USASC.

Chapter 6 Safety In Tactical Operations

6-1. The tactical environment

The tactical environment is an environment of ever-changing demands and unpredictable problems, often under stressful conditions. The interface of man, machine, and environment is constantly shifting. In this environment, mission accomplishment requires continuous leader involvement and flexible decision-making. Not surprisingly, accidents and injuries increase during tactical operations.

a. Safety in the tactical environment depends upon compliance with established standards. However, due to the fluid conditions in the tactical environment, safe

mission accomplishment relies heavily on the complete integration of risk management into both the planning and the execution phases. Risk management will assist commanders in anticipating and controlling hazards in the planning phase and in dealing with unexpected hazards as they arise in the execution phase.

b. In addition to the standard risk management guidance in chapter 3, appendix F provides a list of controls for some of the most likely hazards. (See figure F-2 for a sample soldier risk-readiness evaluation worksheet.)

6-2. Common accidents

During all operations, it is critical that risks be managed to protect the force and preserve the unit's war-fighting capability.

a. Five areas account for more than half of all Army accidents during tactical operations.

(1) *Vehicle operations.* Most accidents in this category are caused by excessive speed for conditions (weather, traffic, and so forth). Other causes are recklessness, fatigue, unfamiliarity with roads, and untrained and inexperienced drivers. Lack of knowledge of equipment/vehicle handling characteristics also contributes to accidents. Strict enforcement of standards is needed for all vehicle operations. The senior occupant must be responsible for this enforcement. Only trained, licensed personnel should be assigned to operate vehicles or equipment. Ground guides are mandatory during movement in bivouac and assembly areas, when backing, and during periods of reduced visibility. Ensure operators are familiar with proper operation and maintenance of commercial equipment.

(2) *Materiel handling.* These accidents occur when an object is too large or too heavy to handle for those attempting to move it. As a result, someone may sustain a muscle or back injury, or may be crushed. Overconfidence in one's ability, a lack of planning, and fatigue are common factors in such accidents.

(3) *Maintenance.* These accidents are often caused by failure to follow procedures, using the wrong tools, and/or fatigue.

(4) *Tactical parachuting.* Poor parachute landing falls (PLFs) cause most of these injuries. Pre-jump training will eliminate most of the problems.

(5) *Sports and recreation.* During extended tactical operations, soldiers may have the opportunity to participate in sports-related activities. Basketball and touch football result in the most injuries. Typical injuries are sprains and bruises. While these accidents usually are not severe, even a sprained ankle reduces the effectiveness of a soldier. Most injuries result from failure to warm up or playing by "combat rules." Both indicate a lack of supervision. Drowning is the leading cause of fatalities in the sports and recreation category.

b. The following activities produce fewer accidents than those listed above; however, when they do occur, they often result in catastrophic damage or death.

(1) *Ammunition and explosives handling.* Horseplay, mishandling, disassembly, unauthorized use, and improper storage of ammunition and explosives account for many of the personnel injury accidents. It is essential to enforce accountability and security procedures for unexpended ammunition and explosives and to comply with explosive storage safety standards in AR 385-64 and DA PAM 385-64.

(2) *Explosive souvenirs.* Educate soldiers to the dangers involved and the serious consequences of collecting unexploded ordnance on the battlefield or on ranges. Post-tactical training shakedown inspections for this type of material are a must. Amnesty boxes are also useful. Platoon sergeants and squad leaders policing their soldiers can prevent most of these accidents.

(3) *Field expedients.* Be suspicious of shortcuts. Although tactical operations frequently involve employment of field expedients, risks and benefits must be carefully weighed. In many cases, field expedients are the result of a weak supply system or inadequate planning.

(4) *Field heaters and stoves.* Operators of all types of heaters and stoves should

be trained and licensed in advance. Equipment should be maintained and operated in accordance with operating instructions, including use of proper fuel. Ensure that combustible material is kept well away from heaters and stoves and that fire-fighting equipment is available for each heater and stove. Heaters or stoves with self-contained fuel supplies (that is, the space heater, small) will not be refilled while the heater is on or still warm. Do not use heaters or stoves in tents or other confined spaces without use of proper ventilation, such as tent vent flaps, doors, or windows.

(5) *Petroleum, oils, lubricants (POL) storage and handling.* POL handlers must know and practice safety rules and procedures. Inspect often to ensure safe storage and transfer of POL products. Proper grounding procedures must be followed. FM 10-67-1 describes use of protective equipment to prevent personnel exposure.

(6) *Soldier fatigue.* When a soldier's sleep time is dependent upon the tactical situation, debilitating fatigue can occur. Soldiers suffering from sleep loss experience various symptoms of fatigue, including decreased coordination, narrowed attention span, and reduced performance to standard. Anticipate fatigue-related errors and take action to prevent them.

(7) *Tactical sleep plan.* Control sleeping areas to prevent soldiers from being crushed by moving vehicles in and out of the area. Commanders need to develop and enforce sleep plans.

(8) *Water operations.* Plan water operations carefully. The risks of drowning and equipment loss are high during water operations. Pair strong swimmers with weak ones to protect personnel. Secure equipment and float it across rather than requiring individuals to carry their equipment. Use safety lines and personal floatation devices.

(9) *Weapons.* Most of these accidents occur when cleaning or clearing individual weapons, entering or exiting vehicles, or running with loaded weapons. Provide guidance for weapons handling, loading, and clearing and see that it is strictly enforced. Do not load weapons that are not essential for the current mission.

(10) *Weather-related casualties.* Consider the effects of weather during planning. Unit effectiveness is lost quickly through weather-related casualties such as frostbite, heat stroke, lightning strikes, and falls. Instruct soldiers in awareness, prevention, and first aid for weather-related injuries and when these conditions can be expected.

6-3. Vehicle convoy operations

Convoy operations can be very dangerous if not properly planned. Control of convoy speed and proper separation between vehicles is critical to reducing the risk of an accident.

a. *Convoy commander responsibilities.* Convoy accidents are most commonly caused by a leader failing to perform his or her duties as the commander of a vehicle movement as required in FM 55-30. This includes failure to control the group's movement, failure to ensure that vehicles maintain proper march speed, and failure to properly mark the unit's vehicles.

(1) Convoy commanders are responsible for ensuring the safe movement of the convoy. To do this they must positively control the convoy's movement by using communications equipment among the vehicles; ensuring each vehicle has a properly trained, equipped, and supervised crew; leading from the front in the absence of radios; and/or other means of managing the march. Control of the movement includes enforcing speed limits, march intervals, seat belt usage, and so forth. It also requires the ability to stop the march if an unexpected hazard is encountered along the route.

(2) Preparing vehicles and soldiers for movement is a leader responsibility. Inexperienced soldiers, personnel turbulence, and ever-increasing training requirements have caused some units to become complacent in managing the risks associated with vehicle movements. In accordance with the risk management process, as outlined in FM 100-14, leaders must identify the hazards associated with the mission and develop, implement, and supervise control measures to mitigate those risks. These

control measures include marking the vehicles in accordance with local SOPs, briefing crews on hazardous conditions expected along the route, pre-combat checks of personnel and equipment, and developing pre-accident emergency contingency plans.

(3) Unit SOPs should address leader responsibilities during movements of any number of vehicles and identify means to implement common controls.

b. Driver skills. Operators should be taught the specific skills needed for tactical vehicle operations, which, in addition to requirements outlined in AR 600–55, include—

- (1) Pulling and backing trailers.
- (2) Vehicle recovery operations.
- (3) Loading and lashing of cargo.
- (4) Methods of negotiating difficult terrain such as sand dunes, rice paddies, mountainous terrain, icy roads, and so forth.
- (5) Ground-guide procedures and signals.
- (6) Methods and procedures for retrieving vehicles stuck in snow, mud, sand, or other restrictive terrain.
- (7) Proper parking and use of the proper-sized chock blocks.

c. Use of safety equipment. When the tactical situation allows, flashers should be turned on immediately if a vehicle is disabled or impedes traffic and every effort made to move the disabled vehicle off the roadway. Highway warning kits should be provided for each vehicle in a convoy. When a vehicle is disabled, place the warning triangle a minimum of 100 meters to the rear of the vehicle and ensure personnel remain clear of the road and the rear of the vehicle.

d. Slow-moving vehicles. Front-end loaders, road graders, and so forth, operating on public highways should display the "slow-moving vehicle" warning triangle on the rear of the vehicle when threat conditions permit. Direct slow-moving vehicles to periodically move off the road to permit traffic to pass when possible.

e. Night Operations.

(1) Personnel who are required to operate motor vehicles while wearing night vision goggles must be trained and tested on the use and operation of such devices and the training recorded on the individual's driver training records.

(2) Ground guides should be used when moving vehicles at night in areas where troops are present.

(3) Blackout driving should be prohibited on roads open to the public.

6–4. Safe movement of personnel

The senior occupant is responsible for ensuring the driver operates the vehicle safely. At a minimum, the driver will—

- a.* Comply with Army regulations and local laws.
- b.* Not exceed the designated seating capacity of the vehicle. (See Technical Bulletin (TB) 9–639.)
- c.* Ensure occupants are seated and wearing restraint devices when available.
- d.* Prohibit passengers from riding on top of vehicles or loads or in a cargo compartment with unsecured cargo.
- e.* Use ground guide when vehicle is backing or moving in bivouac areas.
- f.* Ensure personnel are not transported in dump trucks unless an approved positive locking device is installed.

6–5. Fire prevention

The risk of fire is high in areas where a large number of soldiers are in tents. The following guidance will reduce the risk of fires:

- a.* Establish a fire prevention and protection plan that includes procedures for inspecting and recharging fire extinguishers during tactical operations.
- b.* Appoint a fire marshal for each bivouac area and train them in their duties.

Train soldiers in fire prevention techniques as well as emergency procedures in the event of a fire.

c. Establish safe distances between tents to reduce the risk of multiple losses from one fire.

d. Provide available fire-fighting equipment (portable extinguishers, sand, water buckets, shovels) to contain small fires. Ensure personnel are trained on their use.

e. Establish procedures for sounding fire alarms.

f. Ensure no-smoking areas are established and enforced.

g. Establish an inspection system to ensure compliance with fire prevention standards.

h. Ensure flammable materials are stored in accordance with appropriate directives and checklists.

i. Ensure vehicle fire extinguishing/suppression systems are operational and that crews are proficient in using the systems.

j. Provide a designated fire plan, equipment, and trained personnel for POL storage, ammunition supply points, motor pools, hospitals, hangars, and so forth.

Chapter 7

Garrison and Off-Duty Safety

7-1. General

Soldiers are consistently exposed to hazards in their garrison and off-duty activities as well as during on-duty activities and tactical operations. Although the hazards are usually different, soldiers must use the same techniques to manage risks. Two activities that continually top the list of causes of off-duty accidents are privately owned vehicle operations and sports or recreational activities.

7-2. Privately owned vehicle (POV) operations

Army combat readiness is dependent upon the availability of its personnel. Readiness is clearly degraded when Army personnel die or are injured; and more soldiers die in POV accidents than in any other activity. POV accidents have captured the attention of the Army's top leaders. The Chief of Staff, Army, has directed the commander of every unit to implement the Six Point POV Program. (See appendix D.) This program is the minimum standard in your commander's effort to reduce POV accidents and must include the following elements:

a. *Command emphasis.* Positive leadership at all levels is imperative. Leader involvement in the POV safety program must be unrelenting.

b. *Discipline.* Leaders set the command climate through their actions and must continually set the example.

c. *Risk management.* Risk management must be applied to all vehicle operations, whether on or off duty. Leaders should identify "at risk" soldiers and take proactive measures to modify their risky behavior. (The USASC Web site (<http://safety.army.mil>) provides a comprehensive set of tools and controls for POV operations.)

d. *Standards.* High, unmistakable standards must be set and enforced.

e. *Alternatives.* Leaders must provide soldiers with alternatives to driving POVs. Schedule activities on post whenever possible and promote use of alternative means of transportation.

f. *Commander's assessment.* Commanders, with the soldier's chain of command, must conduct an investigation after every POV accident involving a fatality or serious injury.

7-3. Sports and recreation

a. Unit-level sports develop leadership and teamwork in our soldiers. The ADSO/

NCO assists the commander in developing measures that prevent sports injuries. These elements include effective supervision; properly selected, trained, and motivated participants; and thorough planning, including provisions for adequate facilities and equipment.

b. The team sports that produce the greatest number of accidents and disabling injuries are football, basketball, and softball. Important contributors to the high number of injuries are lack of protective clothing, poor conditioning, and lack of adequate coaching to properly execute play.

c. Although there are fewer injuries in individual sports, some of these activities are potentially very dangerous and can result in severe injuries or death. Some of the individual sports with a high potential for fatal injuries are swimming, fishing, canoeing/rafting, sport parachuting, alpine sports, and hunting.

d. Research studies indicate that 31 percent of sports accidents could be eliminated through effective leadership; about 20 percent of sports accidents could be eliminated by the use of adequate equipment alone. Equipment control is easy to enforce; however, effective personnel controls are much more difficult as they involve the human element—securing cooperation and support of participants.

e. Most people will obey rules that they understand; however, they are much less likely to obey rules that they do not understand. If the ADSO/NCO, sports supervisor, or coach simply presents a list of safety "do's" and "don'ts" without explaining the logic behind them, people will frequently ignore them. By encouraging the proper attitude, the ADSO/NCO can help individuals and teams run their own programs.

Appendix A References

Section I Required Publications

AR 385-10 with change 1

The Army Safety Program (Cited in paras 1-7a(11) and 4-1f.)

AR 385-40

Accident Reporting and Records (Cited in paras 1-7a(7) and 5-1e.)

AR 385-55

Prevention of Motor Vehicle Accidents (Cited in app D-4b and D-4d.)

AR 385-64

U.S. Army Explosives Safety Program (Cited in para 6-2b(1).)

AR 385-95

Army Aviation Accident Prevention (Cited in para 1-1c.)

AR 672-74

Army Accident Prevention Awards Program (Cited in para 1-7a(14).)

DA PAM 385-40

Army Accident Investigation and Reporting (Cited in paras 1-7a(7) and 5-1e.)

DA PAM 385-64

Ammunition and Explosives Safety Standards Cited in para 6-2b(1).)

FM 100-14

Risk Management (Cited in paras 3-1e and 6-3a(2).)

Section II Related Publications

A related publication is a source of additional information. The user does not have to read it to understand this publication.

AR 40-5

Preventive Medicine

AR 385-63

Policies and Procedures for Firing Ammunition for Training, Target Practice, and Combat

AR 420-90

Fire and Emergency Services

AR 600-55

The Army Driver and Operator Standardization Program (Selection, Training, Testing, and Licensing)

DA Pam 40-501

Hearing Conservation Program

DA PAM 738-750

Functional Users Manual for the Army Maintenance Management Systems (TAMMS)

DA PAM 738-751

Functional Users Manual for the Army Maintenance Management System - Aviation (TAMMS-A)

FM 10-67-1

Concepts and Equipment of Petroleum Operations

FM 101-5

Staff Organization and Operations

TB MED 81

Cold Injury

TB MED 507

Occupational and Environmental Health Prevention, Treatment and Control of Heat Injury

TC 11-6

Grounding Techniques

TC 21-21

Water Survival Training

TC 21-305

Training Program for Wheeled Vehicle Accident Avoidance

CD 20-13

Risk Management Chain Teaching (Available by request from US Army Safety Center, Ft Rucker, AL 36362-5363.)

CD OSHA 600

Collateral Duty Safety and Health Course, US Army Safety Center (Available by request from U.S. Army Safety Center, Ft Rucker, AL 36362-5363.)

Leaders Guide to Crew Endurance, US Army Aeromedical Research Laboratory

(<http://safety.army.mil>)

Center for Lessons Learned (CALL) Newsletter No. 99-5

Risk Management for Brigades and Battalions: Task Force XXI Update (<http://call.army.mil>)

Section III**Prescribed Forms**

This section contains no entries.

Section IV**Referenced Forms****DA Form 285 Series**

US Army Accident Report

Appendix B

Guide To Preparing A Pre-Accident Plan

B-1. Accidents generally occur when they are least expected

Accidents generally occur when they are least expected; therefore, confusion can occur at the accident site, and valuable time and critical evidence may be lost or overlooked. The pre-accident plan is a tool to ensure that critical aspects of rescue and investigation are performed in a timely and efficient manner. This appendix is intended to assist commanders and ADSO/NCOs in establishing a pre-accident plan. It is not intended to be all-inclusive or restrictive and may be tailored to meet the requirements of the unit. However, every pre-accident plan should include the following:

- a.* Responsibilities of all offices and individuals with a role to play in accident response.
- b.* Procedures to ensure coordination among all personnel with responsibilities in the pre-accident plan.
- c.* Procedures to activate the pre-accident plan.
- d.* Life-saving and evacuation procedures for injured personnel.
- e.* Procedures for securing the accident site and rendering it free from explosives and environmental hazards.
- f.* Procedures for notifying the chain of command, with current telephone numbers.
- g.* Guidelines for identifying witnesses and people involved in the accident, as well as taking initial statements.
- h.* Policy and procedures regarding the timely taking of toxicology fluid samples by medical personnel.
- i.* Requirements for periodic (at least annual) testing of the pre-accident plan.

B-2. The assignment of specific responsibilities is the heart of the pre-accident plan

The following list of responsibilities provides guidance for developing this plan:

- a.* The operations center will activate the plan and will—
 - (1) Contact the emergency medical treatment staff, fire department, and military police for emergency life-saving efforts.
 - (2) Contact the chain of command to alert them of an accident.
 - (3) Contact appropriate staff members, including the safety office, criminal investigation, provost marshal, chaplain, and public affairs office.
- b.* Medical staff will—
 - (1) Dispatch medical personnel to the accident site as needed via ambulance or helicopter, whichever permits earliest arrival and evacuation of injured.
 - (2) Supervise removal and transportation of injured and provide emergency treatment.
 - (3) Transport injured to nearest (designated) medical facility for treatment.
 - (4) Estimate injury severity to facilitate accident classification.
- c.* The fire department will—
 - (1) Respond immediately to the accident scene as appropriate.
 - (2) Conduct rescue and fire suppression as necessary.
 - (3) Supervise the accident area until fire, if any, is under control or until area is safe for entry by authorized personnel.

(4) Request additional fire-fighting equipment when necessary because of location or nature of fire.

(5) Maintain trained and equipped crash-rescue crew on alert.

(6) Provide appropriate training for personnel.

d. The provost marshal will—

(1) Dispatch security guards to assembly points as needed to provide adequate security and order at the accident site and to prevent pilferage of wreckage. Security personnel will remain on duty until relieved by the safety accident investigation board president.

(2) Train security personnel on specific duties at accident scenes, including restraining spectators, handling wreckage, securing classified material, safeguarding government property, and accident site pass requirements.

(3) Escort recovery vehicles to accident scene.

e. The maintenance officer will—

(1) Ensure qualified personnel are available to assist the safety accident investigation board at the accident site.

(2) Provide the board with an estimated cost of damage (ECOD) to assist in determining accident classification.

(3) Help the board recover and identify wreckage and determine the operating conditions of various parts.

(4) Provide maintenance history.

f. The ADSO/NCO will—

(1) Know requirements of AR 385–40 and DA PAM 385–40.

(2) Review the pre-accident plan and ensure that it is tested at least once annually.

(3) Ensure the accident site is secure until the safety accident investigation board arrives.

(4) Classify the accident based upon ECOD from the maintenance officer and injury severity estimates from the medical activity.

(5) Keep the chain of command informed.

(6) Act as an advisor to the safety accident investigation board and assist its members as necessary.

g. The public affairs officer will—

(1) Dispatch personnel to the accident scene to handle news releases.

(2) Maintain liaison with local news services.

(3) Help investigators identify witnesses and solicit return of wreckage pieces that may have been removed without authorization.

h. The facility engineer will—

(1) Provide, upon request from the safety accident investigation board, personnel and equipment needed to clear land, move earth, or perform other engineering functions related to accident investigation.

(2) Provide environmental engineer to assess environmental damage.

i. Safety accident investigation board president will—

(1) Notify board members of responsibilities.

(2) Designate the assembly point for board members.

(3) Take charge of the accident site and initiate the investigation upon arrival at scene after rescue and fire suppression have been completed.

(4) Conduct the investigation and prepare the report of the investigation as prescribed by AR 385–40 and DA PAM 385–40.

j. The airfield weather officer will—

(1) Issue local weather observations.

(2) Determine if additional weather information will be required for investigation purposes. Analysis of weather conditions occurring at the time and place of accident is essential to the accident investigation. The weather unit must be promptly advised

of an accident or emergency to determine the most accurate weather conditions for the time of the accident.

Appendix C

Suggested Unit Safety Awareness Activities

C-1. Commanders

Commanders will—

- a.* Participate actively in unit safety awareness activities.
- b.* Discuss unit accident experience and accident prevention measures with soldiers.
- c.* Discuss hazard identification, risk assessment, and other aspects of risk management applied to hazardous training activities.
- d.* Present on-the-spot safety promotional gifts to persons observed working safely, eliminating hazards, and so forth. Provide recognition awards, such as letters, safety promotional gifts, “atta-boys,” and so forth.
- e.* Emphasize POV safety issues, such as seatbelt use and recent POV accident history.

C-2. Junior officers

Junior officers will—

- a.* Conduct safety classes for subordinates.
- b.* Develop unit safety programs and SOPs.
- c.* Monitor and supervise safety-training activities.
- d.* Review driver selection procedures and the Driver Training Program.

C-3. Senior NCOs

Senior NCOs will—

- a.* Teach risk management techniques to junior NCOs.
- b.* Monitor and supervise first-line leaders during safety instruction and training.
- c.* Conduct safety surveys to ensure unit safety programs are implemented.
- d.* Review qualifications of personnel for assigned positions.
- e.* Review convoy procedures.
- f.* Review safety requirements for vehicle movement under tactical conditions.
- g.* Review procedures to locate unauthorized duds and weapons, including an amnesty program.

C-4. First-line leaders

First-line leaders will—

- a.* Conduct crew training with emphasis on safety and on hot/cold weather-related injuries.
- b.* Conduct safety classes on contingency mission area operations and survival.
- c.* Review unit medevac procedures.
- d.* Review fuel point operations.
- e.* Discuss effects of dehydration with unit personnel.

C-5. ADSO/NCO

ADSO/NCO will—

- a.* Review and update unit safety programs and publications.
- b.* Conduct safety in-brief for new personnel.
- c.* Review ammunition and explosives safety, transportation, and storage requirements.
- d.* Conduct sports and recreational safety briefings.

- e. Review fire prevention programs.
- f. Conduct motor vehicle accident prevention classes.
- g. Review safety requirements for field mess operations, field sanitation conditions, and waste disposal, in cooperation with medical and environmental personnel.
- h. Coordinate specialized safety training for activities with special hazards.
- i. Arrange safety awareness contests/events.
- j. Ensure unit motorcyclists have received special training.
- k. Arrange for non-punitive POV inspections in unit parking lot by maintenance personnel.
- l. Conduct classes on pedestrian and runner safety, bicycle safety, and troop formation safety.
- m. Coordinate with medical personnel for safety-related classes on relevant subjects (such as hearing conservation, laser safety, respiratory protection).
- n. Coordinate with drug and alcohol personnel for classes on available programs.
- o. Coordinate with fire department personnel to conduct fire-prevention and fire-extinguisher-use classes.
- p. Conduct seatbelt promotion class. Discuss requirements and benefits, show video, and display posters. Conduct spot checks in unit parking lot.
- q. Conduct environmental hazards class, focusing on severe weather, poisonous plants, and insects.
- r. Coordinate with local law enforcement agencies (state highway patrol, city police, sheriff's department, military police) to conduct highway-safety seminar.

C-6. Unit personnel

Unit personnel will—

- a. Conduct surveys of bivouac areas to identify and eliminate unsafe conditions.
- b. Review ground guide requirements and hand signals.
- c. Review emergency first-aid techniques.
- d. Review grounding requirements for generators and electrical equipment.
- e. Review preventive maintenance checks and services (PMCS) on vehicles and ground support equipment.

Appendix D

Commanders Six-Point POV Accident Prevention Program

The Chief of Staff, Army, has directed the commander of every unit to implement the Six Point POV Program. It is the minimum standard in the effort to reduce accidents. The Six Point POV Program requires the following elements:

D-1. Command emphasis

Positive leadership at all levels is imperative. Leader involvement in the POV safety program must be unrelenting.

a. *Commander's policy statement.* Commanders will publish a policy statement on motor vehicle safety. The statement should encourage personal responsibility and emphasize leader involvement regarding vehicle operations. The unit program should include specific guidance that outlines each level of responsibility and clearly reflects the command attitude toward vehicle safety. Unit leaders must be proactive in the POV program; they are the key to minimizing the number-one cause of soldier fatality. Don't wait until a fatality or serious injury occurs. Take action now.

b. *The POV Toolbox.* A group of subject-matter experts consisting of safety professionals, senior NCOs, and officers, were brought together to form a POV action team. The team reviewed Army POV accident fatality cases and researched literature, existing programs, and field input to develop controls for the hazards associated with POV operations. These controls were put together in what is known

as the POV Toolbox. The Leaders' Guide to Using the POV Toolbox supplements the toolbox and assists leaders in identifying possible controls. It is in booklet format and contains vignettes. To find the POV Toolbox and Leaders' Guide, go to Army safety Web site at <http://safety.army.mil>.

c. Positive influence. Typically, first line supervisors see their soldiers every day and can assert a positive influence on how, when, and where their soldiers operate their POVs. For example, if a soldier is going on leave or pass, the supervisor should take time to ensure the soldier's vehicle is in good condition as well as to discuss the soldier's travel plans: Where is the soldier going? How far is it? What time does the soldier plan on departing/returning? What environmental conditions (weather—fog, rain, sleet, etc.— darkness, road conditions, and traffic conditions) may impact the soldier's trip? What is the soldier's physical and mental state? For example, has the soldier just returned from a major deployment?

d. Responsibility. Superiors who treat soldiers as mature adults are most successful. They treat soldiers as people who are motivated to take responsibility for protecting themselves, their families, friends, and peers from harm and undue risk. This is particularly important in matters related to off-duty activities involving vehicle operation and recreation.

D-2. Discipline

a. Discipline starts with leaders. Leaders set the command climate through their actions and should first examine their own actions. Leadership and setting the example do not end at the gate.

b. Negative behavior. Negative behavior, such as traffic offenses, alcohol abuse, misconduct, and poor performance are often indications of potential POV "accidents waiting to happen." Establish a climate of zero tolerance for such risky behavior.

c. At-risk soldiers must be identified. One tool to assist with identifying at-risk soldiers is the "Next Accident Assessment." It can be found on the Army safety Web site at <http://safety.army.mil>. Proactive measures, such as providing counseling, must then be taken to modify their risky behavior.

D-3. Risk management

Apply risk management to all vehicle operations, whether on or off duty. Tools to assist with this responsibility can be found on the Army safety Web site at <http://safety.army.mil>.

a. Leaders and soldiers all have a responsibility to identify, assess, and control the hazards associated with POV operations. The key is to train leaders and soldiers on how to—

(1) Identify hazards associated with operating a vehicle as well as identifying "at risk" behavior (their own behavior, subordinates' behavior, and other drivers' behavior, such as road rage).

(2) Assess the hazards.

(3) Control the hazards.

b. The following should be included in unit policy and training:

(1) *Local-area orientation program.* The ADSO/NCO should establish a local-area orientation program with these common elements:

(a) A large, well-defined map of the local area, marked to show high-accident locations. Alternate routes should be recommended for use during peak traffic periods. Point out hazards that pose a threat to certain types of traffic.

(b) A map of installation road and traffic patterns, location of gates, principal traffic routes, one-way streets, restricted areas, and location of major buildings and services. A presentation could be developed showing various intersections, dangerous cargo routes, special fire lanes, rush-hour routes, or streets that may be changed from one-way to two-way (or vice-versa) during certain peak traffic hours.

(c) An explanation of local, state, or foreign-country traffic regulations and enforcement policies. Some specific topics and laws that should be covered include seatbelt regulations, child-restraint laws, motorcycle-helmet laws, laws for stopped school buses, speed limits, roadway markings, pedestrian crossings, traffic signals, right-turn-on-red laws, expressway regulations, parking on hills, vehicle lighting, implied-consent laws, legal intoxication limit, BAC. Provide a local drivers' manual to all personnel reporting to a new duty station.

(d) A briefing covering weather conditions in the local area as well as routes to outlying areas that may be heavily traveled during weekends and holidays. Explain dangerous road conditions that may develop because of snow, rain, wind, or other severe weather conditions. Provide mileage distances to various points of interest that are regularly visited by personnel during their off-duty time. Recommended maximum travel distances and times under good and adverse weather conditions should be covered.

(e) Information necessary to establish a local orientation program, which can be obtained from several sources such as local safety office, law enforcement agencies, travel clubs, installation public affairs office, and military police.

(2) *Pedestrian safety.* Each year thousands of pedestrians are killed in the United States. Pedestrians account for approximately 15 percent of all traffic deaths, and additional thousands are injured and many permanently disabled. A pedestrian may be someone who walks, runs, stands, rides a bicycle, or who crosses at a crosswalk on roller skates or in a toy vehicle. While each pedestrian accident has its own particular causes, all such accidents have certain factors in common. Make personnel aware of these pedestrian safety tips:

(a) Be alert, courteous, and realistic.

(b) Walk facing traffic.

(c) Wear light-colored clothing or use reflective fluorescent material on clothing when walking during hours of darkness or low visibility.

(d) Cross roads at intersections when possible. When attempting to cross where there is no intersection, exercise extreme caution.

(e) Always obey pedestrian signals.

D-4. Standards

a. Set high, unmistakable standards and enforce them. When you pass by a soldier who is not following the standards and fail to make an on-the-spot correction, you set a new, lower standard. Follow and enforce regulatory traffic standards.

b. The standards for Army traffic safety are outlined in AR 600-55, AR 385-55, and TC 21-305.

c. Unit policy should be uncompromising on the use of seatbelts and motorcycle safety equipment. Educate your soldiers on the risks of speed, fatigue, and alcohol use. Conduct POV safety inspections, and do not allow soldiers to operate faulty equipment.

d. AR 385-55 requires military personnel, aged 26 and under, who possess a military or civilian drivers license, to complete at least four hours of classroom training designed to establish and enforce a positive attitude toward driving.

e. Special testing is required for motorcycle operators prior to operating a motorcycle on post.

f. If soldiers are trained to standard on operating Army vehicles, and they are held to the standard, they will be more likely to carry the same habits with them when operating their POVs. Unit policy must hold soldiers accountable.

g. Child passenger safety. Motor vehicle accidents are the leading cause of preventable deaths and injuries among children in the United States. The tragedy is that these deaths and injuries are not being prevented. All 50 states and the District of Columbia now require approved child restraints for children. In most of these states,

child restraint systems must be used. Make all personnel aware of the requirements and benefits of child-restraint systems.

D-5. Alternatives

Leaders should provide soldiers with alternatives to driving their POVs, when possible. Schedule activities on post to keep soldiers on post and off the road. Keep gyms, recreation centers, and other places soldiers use off-duty open later. These same measures also can provide alternatives to alcohol use. Look for transportation alternatives as well. Promote use of alternative transportation methods instead of POV use. Prominently post public transportation schedules. Sources of transportation might be found through Morale, Welfare, and Recreation (MWR) office, Better Opportunities for Single Soldiers (BOSS), public transportation, designated drivers/unit transportation, or taxi cards. Arrange reduced hotel rates in nearby communities to encourage soldiers to remain overnight on weekends and stay off the highways at night.

D-6. Commander's assessment

After every POV accident that involves a fatality or serious injury, the commander must conduct an investigation of the accident with the soldier's chain of command. The investigation will determine what happened, why it happened, and how it could have been prevented. Commanders will use the results of the investigation to implement corrective and preventive measures and will publicize lessons learned. Immediately hold section or squad meetings to discuss accidents that have occurred. Talk about the lessons learned and incorporate corrective measures into squad or section procedures.

Appendix E Sources Of Assistance

E-1. Supporting safety office

Safety codes, standards, regulations, and risk management; guidance on preparation of hazard abatement plan; guidance/assistance on safety survey, annual inspections; hazard communication; advice on safety demonstrations, exhibits, or exercises; Occupational Safety and Health Administration (OSHA); guidance on accident investigating and reporting; radiation protection officer; guidance on operating overall unit safety program; safety awareness materials; POV and motorcycle safety.

E-2. Transportation office

Driver selection, testing, and licensing; driver training; vehicle maintenance; administration of vehicle safety check programs; Safe-driver Award Program; transportation of hazardous material.

E-3. Medical officer and/or sanitation, preventive medicine staff

Treatment of injuries; hygiene and first aid; prevention of hot- and cold-weather injury; hearing conservation; respiratory protection; admissions records; vision safety; emergency room; preventive medicine and environmental health; physical qualifications of personnel.

E-4. Personnel office

Assignments and transfers (selecting suitable jobs); knowledge of physical disabilities involved in job selection.

E-5. Provost marshal

Enforcement and discipline; seatbelt enforcement; supervision of military police; POV registration; posting of traffic signs, signals, and markings.

E-6. Engineer & housing

Building repair and maintenance; supervision of fire prevention and protection activities; provision of traffic signs, signals, and roadway markings; environmental protection and waste disposal.

E-7. Chaplain

Moral persuasion (attitude development); suicide prevention.

E-8. Training office

Incorporation of safety in training methods and activities.

E-9. Chemical office

Chemical compatibility, storage, and disposal.

E-10. Drug and alcohol office

Drug and alcohol use statistics, training classes, education.

E-11. Defense reutilization and marketing office

Equipment disposal.

E-12. Explosive ordnance disposal (EOD)

Ordnance disposal; explosives training.

E-13. AMC logistic assistance representative

Advice on equipment operation and maintenance.

E-14. Range control

Range safety and procedures.

E-15. Quality assurance specialist, ammunition surveillance (QASAS)

Ammunition safety, storage, malfunction, and quality standards.

E-16. Staff judge advocate

Legal advice; release of accident data.

E-17. Public affairs office

Media control; release of accident data.

E-18. Inspector general

Extension of the commander's eyes and ears.

**Appendix F
Controls For Most-Likely Hazards****F-1. Figure F-1: Controls for Most-Likely Hazards**

This figure identifies most-likely hazards for common operations and recommends sample controls.

Controls for Most-Likely Hazards

Vehicle deficiencies not identified/fixed due to improper PMCS

- Report deficiencies to proper authority in a timely manner
- Ensure proper PMCS by conducting maintenance spot checks of vehicles before dispatch/operation

Unsafe road conditions (wheeled vehicles)

- Select & brief routes that minimize unsafe conditions for:
 - Slippery surface (wet/mud/ice/etc.)
 - Inclines
 - Curves
 - Narrow/congested passages

Excessive speed

- Brief TCs/senior occupants/drivers on speed limits for:
 - Road/trail/terrain hazards
 - Limited visibility
 - Convoy catch-up
 - Vehicle design/cargo loads
 - Bivouac areas/battle positions
 - Closed/open NBC protection modes

Following too close

- Set convoy vehicle intervals based on condition of drivers, visibility, road, vehicles. Increase intervals for:
 - Fatigued drivers
 - Limited visibility (night, fog, rain, snow, dust)
 - Slippery/rough road
 - Vehicles heavily loaded/poor condition

Improper ground guiding

- Ground guide required while:
 - Backing up
 - Operating in limited visibility
 - Operating in congested areas (bivouac, maintenance, assembly & battle positions)
 - Vehicle intercom system inoperative (tracked vehicles only)

Unsecure/unstable load

- Ensure loads are secured IAW load plan & applicable manuals
- Spot check vehicles with emphasis on cargo center of gravity, ammo, & pyrotechnics

Figure F-1. Controls for Most-Likely Hazards

Controls for Most-Likely Hazards

Vehicle Fire

- Brief/rehearse fire procedures IAW appropriate operator manuals

Vehicle rollover

- TC/senior occupant brief rollover procedures; ensure rollover drills conducted

Improper turning

- Yield the right of way
- Avoid oversteering
- Perform U-turns only in authorized areas/locations

Improper passing

- Pass other vehicles only at safe places & times considering road, visibility, & traffic conditions
- Know the clearance space needed for both vehicle & trailer

Unsecure hatch/ramps

- Inspect and repair unsafe condition
- Secure with locking pin or latch devices during operation

Crew/passengers exposed during operation on rough terrain (tracked vehicles)

- Position no higher than "nametag defilade"
- Equipment/cargo stowed and secured IAW load plan
- Wear seatbelts when seated

Improper crew coordination (tracked vehicles)

- Positive communication (confirm that crew members received & understood your communication or signal)
- Announce decision/action
- Perform all actions in the proper sequence & at the right time
- Provide & request assistance when needed

Figure F-1. Controls for Most-Likely Hazards—Continued

Controls for Most-Likely Hazards

Seating/Placement of passengers (wheeled vehicles)

- Spot check vehicles to ensure:
 - No passengers placed in the trailer/cargo area of vehicles carrying ammo, explosives, or hazardous material or in last vehicle of convoy
 - Only one driver & passenger in the cab of vehicles with manual transmission
 - Seating provides three points of contact on fixed surface inside vehicle/sideboards

Hot/cold-weather injuries

- Teach soldiers how to recognize the symptoms of hot/cold weather injuries
- Identify soldiers not acclimated or who have had previous heat/cold injuries
 - Report these soldiers to the chain of command
 - Assign appropriate duties
 - Watch closely for symptoms
- Enforce work/rest/hydration schedules
- Adjust work load during temperature extremes (over 80° F, under 32° F)

Dismounted movement in conditions of limited visibility or adverse terrain

- Use night vision devices
- Wear eye protection
- Run/jump only when tactically necessary
- If you cannot see – STOP!
- Use marked lanes when available
- Warn others of hazards encountered
- Maintain three points of contact in steep/slippy slopes

Improper lifting/carrying of weapons and individual equipment

- Brief/enforce the following precautions:
 - Use safe lifting/balancing/carrying techniques
 - Schedule rest halts and rotate heavy loads during halts
 - Treat all weapons as being loaded
 - Keep blank and live ammo separate
 - Keep weapons on SAFE until ready to fire
 - Do not use weapon as a support or pull stick

Figure F-1. Controls for Most-Likely Hazards—Continued

F-2. Figure F-2: Soldier Risk-Readiness Evaluation Worksheet

This figure provides a worksheet to assist in evaluating each soldier's risk-readiness for the mission.

Are you/your soldiers ready to perform duties?		Y	N
QUALIFICATION:	License		
	Leader/NCO certification		
	Combat lifesaver		
TRAINING:			
Drivers training (wheeled & tracked)			
- Adverse weather/terrain			
- Safe speed for conditions			
- Convoy procedures (tactical/nontactical)			
- Vehicle capabilities			
- PMCS (before/during/after)			
- Ground-guide procedures (signal, distance, etc.)			
Drivers training (tracked only)			
- Rollover procedures (passengers/crew)			
- Crew coordination			
Material handling			
- Lifting, carrying, balance, footing, etc.			
Loading & securing (vehicles/trailers)			
- Equipment			
- Personnel			
Night operations			
- METL, collective, & individual task			
Night vision devices			
- Capabilities			
- Maintenance			
- Wear while performing			
METL			
Collective task			
Individual task			
Weapons handling (safety procedures)			
- Ammunition			
- Duds			
- Pyrotechnics			
- Laser			
- Fratricide prevention			
- Clearing			
- Limited visibility/adverse weather			

Figure F-2. Soldier Risk-Readiness Evaluation Worksheet

Are you/your soldiers ready to perform duties?		Y	N
TRAINING (continued):		SAMPLE	
Avoidance of poisonous plants			
Avoidance of wild animals, snakes, insects, etc.			
Accident/unsafe-act reporting/correction procedures			
Hot/cold-weather injury prevention			
Actions during adverse weather (lightning, etc.)			
Terrain walk (time permitting)			
EXPERIENCE:		SAMPLE	
Newly assigned personnel			
<ul style="list-style-type: none"> - Current - Proficient 			
PHYSICAL/DECISION-MAKING ABILITY:		SAMPLE	
Well rested and alert			
(Example: in last 24 hours, less than 15 hours continuous duty and more than 5 hours sleep)			
EQUIPMENT (PERSONAL PROTECTIVE & OPERATIONAL):		SAMPLE	
Personal protective equipment			
<ul style="list-style-type: none"> - Seatbelts (when available) - Goggles & scarf (dust, mud, snow, rain, etc.) - Kevlar/CVC helmet - Hearing protection 			
Night vision devices			
Tailgate/ramp safety (safety strap if applicable)			
Canvas/bows			
Insect repellent & stinger kits			
CLOTHING:			
Appropriate gear (seasonal)			
<ul style="list-style-type: none"> - Inventory (accountability) 			
NBC protective gear			

Figure F-2. Soldier Risk-Readiness Evaluation Worksheet—Continued

Glossary

Section I Abbreviations

AAR

after action review

ADSO/NCO

additional duty safety officer/non-commissioned officer

AMC

Army Materiel Command

AMV

Army motor vehicle

AR

Army regulation

BAC

Blood alcohol content

BOSS

better opportunities for single soldiers

CALL

Center for Army Lessons Learned

COA

course of action

DA PAM

Department of Army pamphlet

DTG

date time group

ECOD

estimated cost of damage

EIR

equipment improvement report

EOD

explosives ordnance disposal

FM

field manual

FTX

field training exercise

HAZCOM

hazard communication

LAO

logistics assistance officer

MDMP

military decision-making process

METL

mission essential task list

METT-T

mission, enemy, terrain and weather, troops, and time

MSN

mission

MWR

morale, welfare, recreation

NCO

non-commissioned officer

OCOKA

observation and fields of fire, cover and concealment, obstacles, key terrain and decisive terrain, avenues of approach

OPORD

operations order

OSHA

Occupational Safety and Health Administration

PLF

parachute landing fall

PMCS

preventive maintenance, checks, and services

POC

point of contact

POL

petroleum, oils, lubricants

POV

privately owned vehicle

PQDR

product quality deficiency report

QASAS

Quality Assurance Specialist (Ammunition Surveillance)

RM

risk management

SASOHI

standard Army safety and occupational health inspection

SOP

standing operating procedure

TB

technical bulletin

TC

training circular

TDA

table of distribution and allowances

TM

technical manual

TOE

table of organization and equipment

USASC

U.S. Army Safety Center

Section II**Terms****Accident risk**

All operational risk considerations other than tactical risk, including activities associated with hazards concerning friendly personnel, equipment readiness, and environmental conditions.

Controls

Actions taken to eliminate, or reduce the risk of, hazards.

Exposure

The frequency and length of time personnel and equipment are subjected to a hazard.

Hazard

Actual or potential condition that can cause injury, illness, or death of personnel; damage to, or loss of, equipment or property; or mission degradation.

Probability

The likelihood that an event will occur.

Residual risk

The level of risk remaining after controls have been selected for hazards. (Controls are identified and selected until residual risk is at an acceptable level or until it cannot be practically reduced further.)

Risk

Chance of hazard or bad consequences. The probability of exposure to injury or loss from a hazard. Risk level is expressed in terms of hazard probability and severity.

Risk decision

The decision, made by the commander, leader, or the responsible individual, to accept the risks associated with an action.

Risk management

The process of identifying, assessing, and controlling risks arising from operational factors and making decisions that balance risk cost with mission benefits.

Severity

The expected consequence of an event in terms of degree of injury, property damage, or other mission-impairing factors.

Section III**Special Abbreviations and Terms**

This section contains no entries.

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